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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,965	01/26/2006	Takeshi Iwatsu	277515US6PCT	8439
22850 7590 01/11/2008 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER SHAH, TUSHAR S	
			ART UNIT 2184	PAPER NUMBER
			NOTIFICATION DATE 01/11/2008	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/565,965

Applicant(s)

IWATSU, TAKESHI

Examiner

Tushar S. Shah

Art Unit

2184

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 1/26/2006; 5/8/2006.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

This action is in response to the application filed on January 26th, 2006.

Status of Claims

Claims 1-15 are presented for examination. Claims 1-15 are rejected under 35 U.S.C. 103(a). Claim 15 is additionally rejected under 35 U.S.C. 101.

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 15 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 15 recites a program, which is interpreted as a computer program, however, the claim fails to assert the program recorded on an appropriate computer-readable medium so as to be structurally and functionally interrelated to the medium and permit the function of the descriptive

material to be realized. Since a computer program is merely a set of instructions capable of being executed by a computer without a computer-readable medium needed to realize the computer program's functionality, it is regarded as nonstatutory functional descriptive material. See MPEP 2106.01 for details.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ravi et al. US Patent No. 6,292,834 B1 (hereinafter Ravi) in view of Ka Ming et al. US Patent No. 6,993,283 B1 (hereinafter Ka Ming).

Referring to Claim 8, Ravi discloses, a data reproduction method for expanding and reproducing compressed data downloaded through a communication network, comprising:

(a) a step of making a connection to a server (stream server 220, Ravi Fig. 3) delivering the compressed data (Video/ Audio Streams, Ravi Fig. 3) (Network interface circuit 112 is used to send and receive data over a network, Ravi column 5, lines 18-19);

(b) a step of requesting the server to transfer partial data of a maximum size within such a range that the compressed data does not overflow into a memory (playout buffer 366, Ravi column 6, lines 48-50) means at a time of downloading the compressed data (client module 360 includes playout buffer 366 which stores several seconds worth of data packets from the data stream, Ravi column 6, lines 48-50);

(c) a step of starting reproduction compressed data of a prescribed amount is stored (the received compressed analog signal is transferred to the MP3 decoder 80 and the analog signal is decompressed to reproduce the original digitized analog signal, Ka Ming column 5, lines 32-37);

(d) a step of detecting a data size of compressed data temporarily stored in the memory means (the play out buffer stores several seconds of packets of the audio signal and the client computer computes the amount of data it can decompress and render without loss, Ravi column 11, lines 15-18),

(e) a step of controlling to change a threshold value for the data size of the compressed data in accordance with the compression rate detected in the step (d) (the performance variables and computational rate calculated by the client computer 240 are used to alter the bandwidth of the connection with the server, and therefore the amount

of data, to prevent buffer overflow or utilize all of the incoming bandwidth more efficiently, Ravi column 11, lines 15-19, 27-29, and 35-38);

(f) a step of checking whether or not unreproduced compressed data in the memory means becomes less or equal to the threshold value (the client computer 240, determines if the calculated computational rate is higher or lower than the selected bandwidth, Ravi, column 11, lines 19-22);

(g) a step of stopping reproduction when the compressed data is determined as being less-or equal to the threshold value in the step (f), wherein the steps (c), (d), (e), (f), (g) are repeated until a transfer request of all data is completed (Inherent, when the remaining number of packets is less than the output buffer and the bandwidth adjustments of Ravi do not change that, the audio stream is at an end and therefore nothing more would be decompressed (reproduced), Ravi column 3, lines 15-19).

It is noted that Ravi does not teach, (c) a step of starting reproduction compressed data of a prescribed amount is stored;

On the other hand, Ka Ming achieves the claimed feature, (c) a step of starting reproduction compressed data of a prescribed amount is stored (the received compressed analog signal is transferred to the MP3 decoder 80 and the analog signal is decompressed to reproduce the original digitized analog signal, Ka Ming column 5, lines 32-37);

Ravi also does not disclose, and a compression rate of the compressed data downloaded;

On the other hand, Ka Ming achieves the claimed feature, and a compression rate of the compressed data downloaded (a compression ratio is encoded into the MP3 and it is recovered by the demodulator in the receiver in order to reproduce the signal, Ka Ming, column 2, lines 28-33 and 42-44);

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Ravi to demodulate and recover the audio signals from a server as described in Ka Ming. The motivation to combine is apparent in Ravi, specifically, column 6, lines 27-31, where Ravi indicates that any standard method of decompression and recovery maybe used in the context of the disclosed invention.

As per claim 9, Ravi discloses, the data reproduction method according to claim 8, wherein, in the step (e), control is performed to change the threshold value larger when the compression rate of the compressed data temporarily stored in the memory means gets lower), and change the threshold value smaller when the compression rate gets higher (client computer 240 utilizes performance variables from the incoming data stream and the system to calculate the computational rate of the system and bandwidth of the network connection. In combination with Ka Ming as described in claim 8, that performance information would include the compression ratio which is encoded into the MP3 file. Therefore the system would inherently take into account the compression ratio as that directly impacts the ability of the client to decompress and render the incoming packets, Ravi column 11, lines 15-25).

As per claim 10, most of the limitations of the claim have been met in the rejection of claim 9. See the rejection of claim 9 for details.

Neither Ravi nor Ka Ming specifically discloses, the data reproduction method according to claim 9, wherein in the step (d), the compression rate of the compressed data is detected based on data contained in a header or a footer of a file of the compressed data downloaded.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the methods of Ravi and Ka Ming to include this information specifically in a header or footer of the transmission. The motivation to combine is apparent in that, it is a widely known method in the art to prepend or append information about the format or other details, such as a compression ratio, to a transmission or frame in a transmission.

As per claim 11, most of the limitations of the claim have been met in the rejection of claim 9. See the rejection of claim 9 for details. The data reproduction method according to claim 9, wherein in the step (d), the compression rate of the compressed data is detected based on bit rate data of the compressed data downloaded (the system of Ravi compares the incoming bit rate to the average client computational rate in order to adjust the bandwidth of the connection, Ravi column 11, lines 15-25).

As per claim 12, most of the limitations of the claim have been met in the rejection of claim 8. See the rejection of claim 8 for details. The data reproduction method according to claim 8, wherein in the step (e), control is performed to change a first threshold value for determining timing to read out the compressed data from the memory means and a second threshold value for determining timing to interrupt downloading of the compressed data into the memory means (for both increments and decrements of the bandwidth, threshold values are designated and when the number of packets falls outside of those thresholds, the bandwidth is adjusted and therefore the timing of the packets entering into the buffer, Ravi column 3, lines 15-25).

As per claim 13, most of the limitations of the claim have been met in the rejection of claim 1. See the rejection of claim 1 for details. The data reproduction method according to claim 8, wherein in the step (e), control is performed to change the threshold value in accordance with transmission capability of the communication network (the bandwidth is adjusted based on the client computers ability to receive and process packets of data, Ravi column 11, lines 15-19, 27-29, and 35-38).

As per claim 14, most of the limitations of the claim have been met in the rejection of claim 8. See the rejection of claim 8 for details. It is noted that Ravi does not disclose, the data reproduction method according to claim 8, wherein the compressed data is MP3 (MPEG Audio Layer 3) data.

On the other hand, Ka Ming achieves the claimed feature, the data reproduction method according to claim 8, wherein the compressed data is MP3 (MPEG Audio Layer 3) data (audio signals are compressed using the mp3 compression algorithm, Ka Ming column 2, lines 27-28).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Ravi to use MP3s as the audio stream. The motivation to combine is apparent in that Ravi is directed to multimedia streams transmitted over a network and MP3 audio files are commonly used in the art in this manner.

Referring to claim 1, claim 8 recites the corresponding limitations as claim 1. Therefore the rejection of claim 8 applies to claim 1.

Note, claims 2-7 recite the corresponding limitations of claims 9-14. Therefore the rejections of claims 9-14 apply to claims 2-7.

Referring to claim 15, claim 8 recites corresponding limitations as claim 15. Therefore the rejection of claim 8 applies to claim 15.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Logan et al. US Publication No. 2002/0120752 Published on 8/29/2002 discloses a system and method for minimizing perceived dead air time in a streaming audio environment.

Koyanagi US publication No. 2003/0216925 Published on 11/20/2003 discloses a compression and decompression method.

Oh US Publication No. 2004/0008615 Published on 1/15/2004 discloses an audio decoding method which can recover high frequency components.

Takahashi et al. US Publication No. 2005/0053354 discloses an audio/video reproducing system and device therein.

Wegener US Patent No. 7,009,533 Patented on 3/7/2006 discloses adaptive compression and decompression of band limited signals.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tushar S. Shah whose telephone number is (571)-270-1970. The examiner can normally be reached on Mon-Fri 7:30am-5pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Henry Tsai can be reached on 571-272-4176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number:
10/565,965
Art Unit: 2184

Page 11

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T.S.


HENRY TSAI
SUPERVISORY PATENT EXAMINER

1/7/08